

Appendix A:

Proposed Suggested Control Measure for Architectural Coatings.

**California Air Resources Board (ARB)
Suggested Control Measure for Architectural Coatings**

RULE _____ ARCHITECTURAL COATINGS

1. APPLICABILITY

- 1.1 Except as provided in subsection 1.2, this rule is applicable to any person who supplies, sells, offers for sale, or manufactures any architectural coating for use within the District, as well as any person who applies or solicits the application of any architectural coating within the District.
- 1.2 This rule does not apply to:
 - 1.2.1 Any architectural coating that is sold or manufactured for use outside of the District or for shipment to other manufacturers for reformulation or repackaging.
 - 1.2.2 Any aerosol coating product.
 - 1.2.3 Any architectural coating that is sold in a container with a volume of one liter (1.057 quart) or less.

2. DEFINITIONS

- 2.0 Adhesive: Any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.
- 2.1 Aerosol Coating Product: A pressurized coating product containing pigments or resins that dispenses product ingredients by means of a propellant, and is packaged in a disposable can for hand-held application, or for use in specialized equipment for ground traffic/marketing applications.
- 2.2 Antenna Coating: A coating labeled as and formulated exclusively for application to equipment and associated structural appurtenances that are used to receive or transmit electromagnetic signals.
- 2.3 Antifouling Coating: A coating labeled as and formulated for application to submerged stationary structures and their appurtenances to prevent or reduce the attachment of marine or freshwater biological organisms. To qualify as an antifouling coating, the coating must be registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. Section 136, *et seq.*) and with the California Department of Pesticide Regulation.
- 2.4 Appurtenance: Any accessory to a stationary structure coated at the site of installation,

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whether installed or detached, including but not limited to: bathroom and kitchen fixtures; cabinets; concrete forms; doors; elevators; fences; hand railings; heating equipment, air conditioning equipment, and other fixed mechanical equipment or stationary tools; lampposts; partitions; pipes and piping systems; rain gutters and downspouts; stairways, fixed ladders, catwalks, and fire escapes; and window screens.

- 2.5 Architectural Coating: A coating to be applied to stationary structures and their appurtenances at the site of installation, to portable buildings at the site of installation, to pavements, or to curbs. Coatings applied in shop applications or to non-stationary structures such as airplanes, ships, boats, railcars, and automobiles, and adhesives are not considered architectural coatings for the purposes of this rule.
- 2.6 Bitumens: Black or brown materials including, but not limited to, asphalt, tar, pitch, and asphaltite that are soluble in carbon disulfide, consist mainly of hydrocarbons, and are obtained from natural deposits or as residues from the distillation of crude petroleum or coal.
- 2.7 Bituminous Roof Coating: A coating which incorporates bitumens that is labeled as and formulated exclusively for roofing ~~that incorporates bitumens.~~
- 2.8 Bituminous Roof Primer: A primer which incorporates bitumens that is labeled and formulated exclusively for roofing.
- 2.8 9 Bond Breaker: A coating labeled ~~as~~ and formulated for application between layers of concrete to prevent a freshly poured top layer of concrete from bonding to the layer over which it is poured.
- 2.9 10 Clear Brushing Lacquers: Clear wood finishes, excluding clear lacquer sanding sealers, formulated with nitrocellulose or synthetic resins to dry by solvent evaporation without chemical reaction and to provide a solid, protective film, which are intended exclusively for application by brush, and which are labeled as specified in subsection 4.1.5.
- 2.11 0 Clear Wood Coatings: Clear and semi-transparent coatings, including lacquers and varnishes, applied to wood substrates to provide a transparent or translucent solid film.
- 2.12 + Coating: A material applied onto or impregnated into a substrate for protective, decorative, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealers, and stains.
- 2.13 2 Colorant: A concentrated pigment dispersion in water, solvent, and/or binder that is added to an architectural coating after packaging in sale units to produce the desired color.

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- 2.143 Concrete Curing Compound: A coating labeled as and formulated for application to freshly poured concrete to retard the evaporation of water.
- 2.154 Dry Fog Coating: A coating labeled as and formulated only for spray application such that overspray droplets dry before subsequent contact with incidental surfaces in the vicinity of the surface coating activity.
- 2.165 Exempt Compound: A compound identified as exempt under the definition of Volatile Organic Compound (VOC), subsection 2.60 57. Exempt compounds content of a coating shall be determined by U.S. EPA Method 24 or South Coast Air Quality Management District (SCAQMD) Method 303-91 (Revised February 1993), incorporated by reference in subsection 6.5.10.
- 2.176 Faux Finishing Coating: A coating labeled and formulated as a stain or glaze to create artistic effects including, but not limited to, dirt, old age, smoke damage, and simulated marble and wood grain.
- 2.187 Fire-Resistive Coating: An opaque coating labeled as and formulated to protect the structural integrity by increasing the fire endurance of interior or exterior steel and other structural materials, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing assemblies of structural materials into compliance with federal, state, and local building code requirements. The fire-resistive coating and the testing agency must be approved by building code officials. The fire-resistant coating shall be tested in accordance with ASTM Designation E 119-98, incorporated by reference in subsection 6.5.2.
- 2.198 Fire-Retardant Coating: A coating labeled as and formulated to retard ignition and flame spread, that has been fire tested and rated by a testing agency approved by building code officials for use in bringing building and construction materials into compliance with federal, state and local building code requirements. The fire-retardant coating and the testing agency must be approved by building code officials. The fire-retardant coating shall be tested in accordance with ASTM Designation E 84-99, incorporated by reference in subsection 6.5.1.
- 2.2019 Flat Coating: A coating that is not defined under any other definition in this rule and that registers gloss less than 15 on an 85-degree meter or less than 5 on a 60-degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in subsection 6.5.3.
- 2.210 Floor Coating: An opaque coating that is labeled as and formulated for application to flooring, including, but not limited to, decks, porches, steps, and other horizontal surfaces which may be subject to foot traffic, ~~for the purposes of abrasion resistance.~~

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- 2.22~~1~~ Flow Coating: A coating labeled and formulated exclusively for use ~~that is used~~ by electric power companies or their subcontractors ~~exclusively~~ to maintain the protective coating systems present on utility transformer units.
- 2.23~~2~~ Form-Release Compound: A coating labeled ~~as~~ and formulated for application to a concrete form to prevent the freshly poured concrete from bonding to the form. The form may consist of wood, metal, or some material other than concrete.
- 2.24~~3~~ Graphic Arts Coating or Sign Paint: A coating labeled ~~as~~ and formulated for hand-application by artists using brush or roller techniques to indoor and outdoor signs (excluding structural components) and murals including lettering enamels, poster colors, copy blockers, and bulletin enamels.
- 2.25~~4~~ High-Temperature Coating: A high performance coating labeled ~~as~~ and formulated for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).
- 2.26~~5~~ Industrial Maintenance Coating: A high performance architectural coating, ~~excluding floor coatings but~~ including primers, sealers, undercoaters, intermediate coats, and topcoats, formulated for application to substrates exposed to one or more of the following extreme environmental conditions listed in subsections 2.26~~5~~.1 through 2.26~~5~~.5, and labeled as specified in subsection 4.1.4:
- 2.26~~5~~.1 Immersion in water, wastewater, or chemical solutions (aqueous and non-aqueous solutions), or chronic exposure of interior surfaces to moisture condensation;
 - 2.26~~5~~.2 Acute or chronic exposure to corrosive, caustic or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions;
 - 2.26~~5~~.3 Repeated exposure to temperatures above 121°C (250°F);
 - 2.26~~5~~.4 Repeated (frequent) heavy abrasion, including mechanical wear and repeated (frequent) scrubbing with industrial solvents, cleansers, or scouring agents; or
 - 2.26~~5~~.5 Exterior exposure of metal structures and structural components.
- 2.27~~6~~ Lacquer: A clear or opaque wood coating, including clear lacquer sanding sealers, formulated with cellulosic or synthetic resins to dry by evaporation without chemical reaction and to provide a solid, protective film. ~~Lacquer stains are considered stains, not lacquers.~~
- 2.28~~7~~ Low Solids Coating: A coating containing 0.12 kilogram or less of solids per liter (1 pound or less of solids per gallon) of coating material.
- 2.29~~8~~ Magnesite Cement Coating: A coating labeled ~~as~~ and formulated for application to magnesite cement decking to protect the magnesite cement substrate from erosion by water.
- 2.30~~9~~ Mastic Texture Coating: A coating labeled ~~as~~ and formulated to cover holes and minor

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cracks and to conceal surface irregularities, and is applied in a single coat of at least 10 mils (0.010 inch) dry film thickness.

- 2.31~~0~~ Metallic Pigmented Coating: A coating containing at least 48 grams of elemental metallic pigment per liter of coating as applied (0.4 pounds per gallon), when tested in accordance with SCAQMD Method 318-95, incorporated by reference in subsection 6.5.4.
- 2.32~~+~~ Multi-Color Coating: A coating that is packaged in a single container and that exhibits more than one color when applied in a single coat.
- 2.33~~2~~ Nonflat Coating: A coating that is not defined under any other definition in this rule and that registers a gloss of 15 or greater on an 85-degree meter and 5 or greater on a 60-degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in subsection 6.5.3.
- 2.34 Nonflat - High Gloss Coating: A nonflat coating that registers a gloss of 70 or above on a 60 degree meter according to ASTM Designation D 523-89 (1999), incorporated by reference in subsection 6.5.3.
- 2.35 Nonindustrial Use: Nonindustrial use means any use of architectural coatings except in the construction or maintenance of any of the following: facilities used in the manufacturing of goods and commodities; transportation infrastructure, including highways, bridges, airports and railroads; facilities used in mining activities, including petroleum extraction; and utilities infrastructure, including power generation and distribution, and water treatment and distribution systems.
- 2.36~~3~~ Post-Consumer Coating: A finished coating that would have been disposed of in a landfill, ~~as a solid waste~~, having completed its usefulness to a consumer, and does not include manufacturing wastes.
- 2.37~~4~~ Pre-Treatment Wash Primer: A primer that contains a minimum of 0.5 percent acid, by weight, when tested in accordance with ASTM Designation D 1613-96, incorporated by reference in subsection 6.5.5, that is labeled ~~as~~ and formulated for application directly to bare metal surfaces to provide corrosion resistance and to promote adhesion of subsequent topcoats.
- 2.38~~5~~ Primer: A coating labeled ~~as~~ and formulated for application to a substrate to provide a firm bond between the substrate and subsequent coats.
- 2.39~~6~~ Quick-Dry Enamel: A nonflat coating that is labeled as specified in subsection 4.1.8 and that is ~~and~~ formulated to have the following characteristics:

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- 2.396.1 Is capable of being applied directly from the container under normal conditions with ambient temperatures between 16 and 27°C (60 and 80°F);
 - 2.396.2 When tested in accordance with ASTM Designation D 1640-95, incorporated by reference in subsection 6.5.6, sets to touch in 2 hours or less, is tack free in 4 hours or less, and dries hard in 8 hours or less by the mechanical test method; and
 - 2.396.3 Has a dried film gloss of 70 or above on a 60 degree meter.
- 2.4037 Quick-Dry Primer, Sealer, and Undercoater: A primer, sealer, or undercoater that is dry to the touch in 30 minutes and can be recoated in 2 hours when tested in accordance with ASTM Designation D 1640- 95, incorporated by reference in subsection 6.5.6.
- 2.41 38 Recycled Coating: An architectural coating formulated such that not less than 50 percent of the total weight consists of secondary and post-consumer coating, with not less than 10 percent of the total weight consisting of post-consumer coating.
- 2.4239 Residence: Areas where people reside or lodge, including, but not limited to, single and multiple family dwellings, condominiums, mobile homes, apartment complexes, motels, and hotels.
- 2.430 Roof Coating: A non-bituminous coating labeled ~~as~~ and formulated exclusively for application to ~~exterior~~ roofs for the primary purpose of preventing penetration of the substrate by water or reflecting heat and ~~reflecting~~ ultraviolet radiation. Metallic pigmented roof coatings which qualify as metallic pigmented coatings shall not be considered to be in this category, but shall be considered to be in the metallic pigmented coatings category.
- 2.44+ Rust Preventative Coating: A coating formulated exclusively for nonindustrial use ~~in or on a residence~~ to prevent the corrosion of metal surfaces and labeled as specified in subsection 4.1.6.
- 2.452 Sanding Sealer: A clear wood coating sealer labeled ~~as~~ and formulated for application to bare wood to seal the wood and to provide a coat that can be sanded to create a smooth surface for subsequent applications of coatings. A sanding sealer that also meets the definition of a lacquer is not included in this category, but is included in the lacquer category.
- 2.463 Sealer: A coating labeled ~~as~~ and formulated for application to a substrate for one or more of the following purposes: to prevent subsequent coatings from being absorbed by the substrate, or to prevent harm to subsequent coatings by materials in the substrate.

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- 2.474 Secondary Coating (Rework): A fragment of a finished coating or a finished coating from a manufacturing process that has converted resources into a commodity of real economic value, but does not include excess virgin resources of the manufacturing process.
- 2.485 Shellac: A clear or opaque coating formulated solely with the resinous secretions of the lac beetle (*Lacifer lacca*), thinned with alcohol, and formulated to dry by evaporation without a chemical reaction.
- 2.496 Shop Application: Application of a coating to a product or a component of a product in or on the premises of a factory or a shop as part of a manufacturing, production, or repairing process (e.g., original equipment manufacturing coatings).
- 2.5047 Solicit: To require for use or to specify, by written or oral contract.
- 2.5148 Specialty Primer, Sealer, and Undercoater: A coating labeled as specified in subsection 4.1.7 and that is formulated for application to a substrate to seal fire, smoke or water damage; to condition excessively chalky surfaces, or to block stains. An excessively chalky surface is one that is defined as having a chalk rating of four or less as determined by ASTM Designation D 4214-98, incorporated by reference in subsection 6.5.7.
- 2.5249 Stain: A clear, semitransparent, or opaque ~~wood~~ coating labeled as and formulated to change the color of a surface but not conceal the grain pattern or texture, ~~including lacquer stains.~~
- 2.530 Swimming Pool Coating: A coating labeled as and formulated to coat the interior of swimming pools and to resist swimming pool chemicals.
- 2.541 Swimming Pool Repair and Maintenance Coating: A rubber based coating labeled as and formulated to be used over existing rubber based coatings for the repair and maintenance of swimming pools.
- 2.552 Temperature-Indicator Safety Coating: A coating labeled and formulated as a color-changing indicator coating for the purpose of monitoring the temperature and safety of the substrate, underlying piping, or underlying equipment, and for application to substrates exposed continuously or intermittently to temperatures above 204°C (400°F).
- 2.563 Tint Base: An architectural coating to which colorant is added after packaging in sale units to produce a desired color.
- 2.574 Traffic Marking Coating: A coating labeled as and formulated for marking and striping streets, highways, or other traffic surfaces including, but not limited to, curbs, berms, driveways, parking lots, sidewalks, and airport runways.
- 2.585 Undercoater: A coating labeled as and formulated to provide a smooth surface for subsequent coatings.

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- 2.596 Varnish: A clear or semi-transparent wood coating, excluding lacquers and shellacs, formulated to dry by chemical reaction on exposure to air. Varnishes may contain small amounts of pigment to color a surface, or to control the final sheen or gloss of the finish.
- 2.6057 Volatile Organic Compound (VOC): Any volatile compound containing at least one atom of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, and excluding the following:
- 2.6057.1 methane;
methylene chloride (dichloromethane);
1,1,1-trichloroethane (methyl chloroform);
trichlorofluoromethane (CFC-11);
dichlorodifluoromethane (CFC-12);
1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113);
1,2-dichloro-1,1,2,2-tetrafluoroethane (CFC-114);
chloropentafluoroethane (CFC-115);
chlorodifluoromethane (HCFC-22);
1,1,1-trifluoro-2,2-dichloroethane (HCFC-123);
2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124);
1,1-dichloro-1-fluoroethane (HCFC-141b);
1-chloro-1,1-difluoroethane (HCFC-142b);
trifluoromethane (HFC-23);
pentafluoroethane (HFC-125);
1,1,2,2-tetrafluoroethane (HFC-134);
1,1,1,2-tetrafluoroethane (HFC-134a);
1,1,1-trifluoroethane (HFC-143a);
1,1-difluoroethane (HFC-152a);
cyclic, branched, or linear completely methylated siloxanes;
the following classes of perfluorocarbons:
(A) cyclic, branched, or linear, completely fluorinated alkanes;
(B) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
(C) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
(D) sulfur-containing perfluorocarbons with no unsaturations and with the sulfur bonds only to carbon and fluorine; and
- 2.6057.2 the following low-reactive organic compounds which have been exempted by the U.S. EPA:
acetone;
ethane;
parachlorobenzotrifluoride (1-chloro-4-trifluoromethyl benzene);
perchloroethylene; and
methyl acetate.
- 2.6158 VOC Content: The weight of VOC per volume of coating, calculated according to the procedures specified in subsection 6.1.

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- 2.6259 Waterproofing Wood Sealer: A coating labeled as and formulated for application to a porous wood substrate for the primary purpose of preventing the penetration of water.
- 2.63 Waterproofing Concrete/Masonry Sealer: A clear or pigmented film-forming coating that is labeled and formulated for sealing concrete and masonry to provide resistance against water, alkalis, acids, ultraviolet light, and staining.
- 2.640 Wood Preservative: A coating labeled as and formulated to protect exposed wood from decay or insect attack, that is registered with both the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code (U.S.C.) Section 136, *et seq.*) and with the California Department of Pesticide Regulation.

3. STANDARDS

- 3.1 **VOC Content Limits:** Except as provided in subsections 3.2, ~~and 3.3, and 3.8~~, no person shall, ~~within the District, (i) manufacture, blend, or repackage for sale within the district; (ii) supply, sell, or offer for sale within the district; sell, apply; or (iii) solicit for the application or apply within the district, of~~ any architectural coating with a VOC content in excess of the corresponding limit specified in Table 1, after the specified effective date in Table 1.
- 3.2 **Most Restrictive VOC Limit:** If anywhere on the container of any architectural coating, or any label or sticker affixed to the container, or in any sales, advertising, or technical literature supplied by a manufacturer or anyone acting on their behalf, any representation is made that indicates that the coating meets the definition of or is recommended for use for more than one of the coating categories listed in Table 1, then the most restrictive VOC content limit shall apply. This provision does not apply to the coating categories specified in subsections 3.2.1 through 3.2.14.
- 3.2.1 Lacquer coatings (including lacquer sanding sealers ~~but excluding lacquer stains~~).
- 3.2.2 Metallic pigmented coatings.
- 3.2.3 Shellacs.
- 3.2.4 Fire-retardant coatings.
- 3.2.5 Pretreatment wash primers ~~that also meet the definition for industrial maintenance coatings are subject only to the VOC content limit in Table 1 for pretreatment wash primers.~~
- 3.2.6 Industrial maintenance coatings.
- 3.2.7 Low-solids coatings.

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- 3.2.8 Wood preservatives.
- 3.2.9 High temperature coatings.
- 3.2.10 Temperature-indicator safety coatings.
- 3.2.11 Antenna coatings.
- 3.2.12 Antifouling coatings.
- 3.2.13 Flow coatings.
- 3.2.14 Bituminous roof primers.
- 3.3 **Sell-Through of Coatings:** A coating manufactured prior to the effective date specified for that coating in Table 1 may be sold, supplied, or offered for sale for up to three years after the specified effective date. In addition, a coating manufactured before the effective date specified for that coating in Table 1 may be applied at any time, both before and after the specified effective date, so long as the coating complied with the standards in effect at the time the coating was manufactured. This subsection 3.3 does not apply to any coating that does not display the date or date-code required by subsection 4.1.1.
- 3.4 **Painting Practices:** All architectural coating containers used to apply the contents therein to a surface directly from the container by pouring, siphoning, brushing, rolling, padding, ragging or other means, shall be closed when not in use. These architectural coating containers include, but are not limited to, drums, buckets, cans, pails, trays or other application containers. Containers of any VOC-containing materials used for thinning and cleanup shall also be closed when not in use. ~~“Not in use” includes, but is not limited to, any interruption, delay, completion of transfer of the contents, or termination of the application.~~
- 3.5 **Thinning:** No person who applies or solicits the application of any architectural coating shall apply a coating that is thinned to exceed the applicable VOC limit specified in Table 1.
- ~~3.6 **Industrial Maintenance Coatings:** Any person who applies or solicits the application of any architectural coating within the District shall follow the manufacturer’s recommendation regarding the application of industrial maintenance coatings as described in subsection 4.1.4. Effective January 1, 2004, no person who applies or solicits the application of any architectural coating shall apply an industrial maintenance coating in or on a residence as defined in subsection 2.39 or in or on areas of industrial, commercial, or institutional facilities not exposed to the extreme environmental conditions identified in subsection 2.25, such as office space and meeting rooms.~~
- 3.67 **Rust Preventative Coatings:** Effective January 1, 2004, no person shall apply or solicit

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the application of any rust preventative coating for industrial use, unless such a rust preventative coating complies with the industrial maintenance coating VOC limit specified in Table 1.

~~3.7~~ **Coatings Not Listed in Table 1:** For any coating that does not meet any of the definitions for the specialty coatings categories listed in Table 1, the VOC content limit shall be determined by classifying the coating as a flat coating or a nonflat coating, based on its gloss, as defined in subsections ~~2.2019~~, ~~and 2.332~~, and 2.34 and the corresponding flat or nonflat VOC limit shall apply.

3.8 **Industrial Maintenance Coatings:**

3.8.1 After January 1, 2004, a manufacturer, seller, or user may petition the APCO to apply an industrial maintenance coating with a VOC content up to 340 g/l if all of the following conditions are met:

3.8.1.1 The industrial maintenance coating is to be applied in a district located within the North Central Coast, San Francisco Bay Area, or North Coast Air Basins.

3.8.1.2 The petition submitted to the APCO contains the following information, as applicable: job requirements and description, volume of coating, maximum VOC content, and a certification that a complying coating meeting the job performance requirements is not available.

3.8.1.3 If the APCO grants written approval, such approval shall contain volume and VOC limit conditions. Until written approval is granted by the APCO and received by the petitioner, all provisions of this rule shall apply.

3.8.2 The APCO shall not approve any petition under subsection 3.8.1 if the approvals previously granted by the APCO during the calendar year, when combined with the petition under consideration, would result in excess VOC emissions for that calendar year which would be greater than 5 percent of the annual emission reduction achieved within the district from implementing the January 1, 2004, VOC limit for industrial maintenance coatings.

3.8.3 This provision shall not apply to industrial maintenance coatings that are for retail sale.

4. CONTAINER LABELING REQUIREMENTS

4.1 Each manufacturer of any architectural coating subject to this rule shall display the information listed in subsections 4.1.1 through 4.1.87 on the coating container (or label) in which the coating is sold or distributed.

4.1.1 **Date Code:** The date the coating was manufactured, or a date code representing the date, shall be indicated on the label, lid, or bottom of the container. If the manufacturer uses a date code for any coating, the manufacturer shall file an explanation of each code with the Executive Officer of the ARB.

4.1.2 **Thinning Recommendations:** A statement of the manufacturer's recommendation regarding thinning of the coating shall be indicated on the label or lid of the container. This requirement does not apply to the thinning of architectural coatings with water. If thinning of the coating prior to use is not necessary, the recommendation must specify that the coating is to be applied without thinning.

4.1.3 **VOC Content:** Each container of any coating subject to this rule shall display either the maximum or the actual VOC content of the coating, as supplied, including the maximum thinning as recommended by the manufacturer. VOC content shall be displayed in grams of VOC per liter of coating. VOC content displayed shall be calculated using product formulation data, or shall be determined using the test methods in subsection 6.2. The equations in subsection 6.1 shall be used to calculate VOC content.

4.1.4 **Industrial Maintenance Coatings:** In addition to the information specified in subsection 4.1.1, 4.1.2, and 4.1.3, each manufacturer of any industrial maintenance coating subject to this rule shall display on the label or lid of the container in which the coating is sold or distributed one or more of the descriptions listed in subsections 4.1.4.1 through 4.1.4.34.

4.1.4.1 "For industrial use only."

4.1.4.2 "For professional use only."

4.1.4.3 "Not for residential use" or "Not intended for residential use."

4.1.4.4 ~~"This coating is intended for use under the following condition(s):"~~
(Include each condition in subsections 4.1.5.4.1 through 4.1.5.4.5 that applies to the coating.)

4.1.4.4.1 Immersion in water, wastewater, or chemical solutions (aqueous and nonaqueous solutions), or chronic exposure of interior surfaces to moisture condensation;

4.1.4.4.2 Acute or chronic exposure to corrosive, caustic, or acidic agents, or to chemicals, chemical fumes, or chemical mixtures or solutions;

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- 4.1.4.4.3 ~~Repeated exposure to temperatures above 121°C (250°F);~~
- 4.1.4.4.4 ~~Repeated (frequent) heavy abrasion, including mechanical wear and repeated (frequent) scrubbing with industrial solvents, cleaners, or scouring agents; or~~
- 4.1.4.4.5 ~~Exterior exposure of metal structures and structural components.~~
- 4.1.5 **Clear Brushing Lacquers:** Effective January 1, 2003, the labels of all clear brushing lacquers ~~each container of this category shall prominently display the statements~~ explicit label instructions that the product is formulated “For brush application only,” and that “This product must not be thinned or sprayed.” ~~thinning and/or spraying is not permitted.~~
- 4.1.6 **Rust Preventative Coatings:** Effective January 1, 2003, the labels of all rust preventative coatings shall prominently display ~~include~~ the statement “For Metal Substrates Only” prominently displayed.
- 4.1.7 **Specialty Primers, Sealers, and Undercoaters:** Effective January 1, 2003, the labels of all specialty primers, sealers, and undercoaters shall prominently display one or more of the descriptions listed in subsection 4.1.7.1 through 4.1.7.5.
 - 4.1.7.1 “For blocking stains ~~only.~~”
 - 4.1.7.2 “For fire-damaged substrates ~~only.~~”
 - 4.1.7.3 “For smoke-damaged substrates ~~only.~~”
 - 4.1.7.4 “For water-damaged substrates ~~only.~~”
 - 4.1.7.5 “For excessively chalky substrates ~~only.~~”
- 4.1.8 **Quick Dry Enamels:** Effective January 1, 2003, the labels of all quick dry enamels shall prominently display the words “Quick Dry” and the dry hard time.
- 4.1.9 **Non-flat - High Gloss Coatings:** Effective January 1, 2003, the labels of all non-flat - high gloss coatings shall prominently display the words “High Gloss.”

5. REPORTING REQUIREMENTS

- 5.1 **Clear Brushing Lacquers:** Each manufacturer of clear brushing lacquers shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of clear brushing lacquers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.
- 5.2 **Rust Preventative Coatings:** Each manufacturer of rust preventative coatings shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of

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gallons of rust preventative coatings sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

5.3 **Specialty Primers, Sealers, and Undercoaters:** Each manufacturer of specialty primers, sealers, and undercoaters shall, on or before April 1 of each calendar year beginning in the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall specify the number of gallons of specialty primers, sealers, and undercoaters sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

5.4 **Toxic Exempt Compounds:** For each architectural coating that contains perchloroethylene or methylene chloride, the manufacturer shall, on or before April 1 of each calendar year beginning with the year 2004, report to the Executive Officer of the ARB the following information for products sold in the State during the preceding year:

5.4.1 the product brand name and a copy of the product label with legible usage instructions;

5.4.2 the product category listed in Table 1 to which the coating belongs;

5.4.3 the total sales in California during the calendar year to the nearest gallon;

5.4.4 the volume percent, to the nearest 0.10 percent, of perchloroethylene and methylene chloride in the coating.

5.5 **Recycled Coatings:** Manufacturers of recycled coatings must submit a letter to the Executive Officer of the ~~ARB Air Resources Board~~ certifying their status as a Recycled Paint Manufacturer. The manufacturer shall, on or before April 1 of each calendar year beginning with the year 2004, submit an annual report to the Executive Officer of the ARB. The report shall include, for all recycled coatings, the total number of gallons distributed in the State California during the preceding year, and shall describe the method used by the manufacturer to calculate State distribution.

5.6 **Bituminous Coatings:** Each manufacturer of bituminous roof coatings or bituminous roof primers shall, on or before April 1 of each calendar year beginning with the year 2004, submit an annual report to the Executive Officer of ARB. The report shall specify the number of gallons of bituminous roof coatings or bituminous roof primers sold in the State during the preceding calendar year, and shall describe the method used by the manufacturer to calculate State sales.

6. COMPLIANCE PROVISIONS AND TEST METHODS

6.1 **Calculation of VOC Content:** For the purpose of determining compliance with the VOC content limits in Table 1, the VOC content of a coating shall be determined by using the procedures described in subsection 6.1.1 or 6.1.2, as appropriate. The VOC content of a tint base shall be determined without colorant that is added after the tint base is manufactured.

6.1.1 With the exception of low solids coatings, determine the VOC content in grams of

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VOC per liter of coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water and exempt compounds. Determine the VOC content using equation 1 as follows:

$$\text{VOC Content} = \frac{(W_s - W_w - W_{ec})}{(V_m - V_w - V_{ec})} \quad (1)$$

Where:

VOC content = grams of VOC per liter of coating
 W_s = weight of volatiles, in grams
 W_w = weight of water, in grams
 W_{ec} = weight of exempt compounds, in grams
 V_m = volume of coating, in liters
 V_w = volume of water, in liters
 V_{ec} = volume of exempt compounds, in liters

6.1.2 For low solids coatings, determine the VOC content in units of grams of VOC per liter of coating thinned to the manufacturer's maximum recommendation, including the volume of any water and exempt compounds. Determine the VOC content using equation 2 as follows:

$$\text{VOC Content}_{1s} = \frac{(W_s - W_w - W_{ec})}{(V_m)} \quad (2)$$

Where:

VOC content_{1s} = the VOC content of a low solids coating in grams of VOC per liter of coating
 W_s = weight of volatiles, in grams
 W_w = weight of water, in grams
 W_{ec} = weight of exempt compounds, in grams
 V_m = volume of coating, in liters

6.2 **VOC Content of Coatings:** To determine the physical properties of a coating in order to perform the calculations in subsection 6.1, the reference method for VOC content is U.S. EPA Method 24, incorporated by reference in subsection 6.5.11, except as provided in subsections 6.3 and 6.4. An alternative method to determine the VOC content of coatings is SCAQMD Method 304-91 (Revised February 1996), incorporated by reference in subsection 6.5.12. The exempt compounds content shall be determined by SCAQMD Method 303-91 (Revised August 1996), incorporated by reference in subsection 6.5.10. To determine the VOC content of a coating, the manufacturer may use U.S. EPA Method 24, or an alternative method as provided in subsection 6.3, formulation data, or any other reasonable means for predicting that the coating has been formulated as intended (e.g., quality assurance checks, recordkeeping). However, if there are any inconsistencies between the results of a Method 24 test and any other means for determining VOC content, the Method 24 test results will govern, except when

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an alternative method is approved as specified in subsection 6.3. The District Air Pollution Control Officer (APCO) may require the manufacturer to conduct a Method 24 analysis.

- 6.3 **Alternative Test Methods:** Other test methods demonstrated to provide results that are acceptable for purposes of determining compliance with subsection 6.2, after review and approved in writing by the staffs of the District, the ARB, and the U.S. EPA, may also be used.
- 6.4 **Methacrylate Traffic Marking Coatings:** Analysis of methacrylate multicomponent coatings used as traffic marking coatings shall be conducted according to a modification of U.S. EPA Method 24 (40 CFR 59, subpart D, Appendix A), incorporated by reference in subsection 6.5.13. This method has not been approved for methacrylate multicomponent coatings used for other purposes than as traffic marking coatings or for other classes of multicomponent coatings.
- 6.5 **Test Methods:** ~~For coatings subject to the provisions of this rule, the following test methods shall be used:~~ The following test methods are incorporated by reference herein, and shall be used to test coatings subject to the provisions of this rule:
- 6.5.1 **Flame Spread Index:** The flame spread index of a fire-retardant coating shall be determined by ASTM Designation E 84-99, "Standard Test Method for Surface Burning Characteristics of Building Materials," ~~incorporated by reference in~~ (see section 2, Fire-Retardant Coating).
- 6.5.2 **Fire Resistance Rating:** The fire resistance rating of a fire-resistive coating shall be determined by ASTM Designation E 119-98, "Standard Test Methods for Fire Tests of Building Construction Materials," ~~incorporated by reference in~~ (see section 2, Fire-Resistive Coating).
- 6.5.3 **Gloss Determination:** The gloss of a coating shall be determined by ASTM Designation D 523-89 (1999), "Standard Test Method for Specular Gloss," ~~incorporated by reference in~~ (see section 2, Flat Coating, Nonflat Coating, Nonflat - High Gloss Coating, and Quick-Dry Enamel).
- 6.5.4 **Metal Content of Coatings:** The metallic content of a coating shall be determined by SCAQMD Method 318-95, "Determination of Weight Percent Elemental Metal in Coatings by X-Ray Diffraction," SCAQMD "Laboratory Methods of Analysis for Enforcement Samples," ~~incorporated by reference in~~ (see section 2, Metallic Pigmented Coating).
- 6.5.5 **Acid Content of Coatings:** The acid content of a coating shall be determined by ASTM Designation D 1613-96, "Standard Test Method for Acidity in Volatile Solvents and Chemical Intermediates Used in Paint, Varnish, Lacquer, and Related Products," ~~incorporated by reference in~~ (see section 2, Pre-treatment Wash Primer).

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- 6.5.6 **Drying Times:** The set-to-touch, dry-hard, dry-to-touch, and dry-to-recoat times of a coating shall be determined by ASTM Designation D 1640- 95, “Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature,” ~~incorporated by reference in~~ (see section 2, Quick-Dry Enamel and Quick-Dry Primer, Sealer, and Undercoater). The tack-free time of a quick-dry enamel coating shall be determined by the Mechanical Test Method of ASTM Designation D 1640- 95.
- 6.5.7 **Surface Chalkiness:** The chalkiness of a surface shall be determined using ASTM Designation D 4214-98, “Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films,” ~~incorporated by reference in~~ (see section 2, Specialty Primer, Sealer, and Undercoater).
- 6.5.8 **Exempt Compounds--Siloxanes:** Exempt compounds that are cyclic, branched, or linear completely methylated siloxanes, shall be analyzed as exempt compounds for compliance with section 6 by BAAQMD Method 43, “Determination of Volatile Methylsiloxanes in Solvent-Based Coatings, Inks, and Related Materials,” BAAQMD Manual of Procedures, Volume III, adopted 11/6/96, ~~incorporated by reference in~~ (see section 2, Volatile Organic Compound, and subsection 6.2).
- 6.5.9 **Exempt Compounds--Parachlorobenzotrifluoride (PCBTF):** The exempt compound parachlorobenzotrifluoride, shall be analyzed as an exempt compound for compliance with section 6 by BAAQMD Method 41, “Determination of Volatile Organic Compounds in Solvent Based Coatings and Related Materials Containing Parachlorobenzotrifluoride,” BAAQMD Manual of Procedures, Volume III, adopted 12/20/95, ~~incorporated by reference in~~ (see section 2, Volatile Organic Compound, and subsection 6.2).
- 6.5.10 **Exempt Compounds:** ~~The content of compounds~~ Exempt compounds content under U.S. EPA Method 24 shall be analyzed by SCAQMD Method 303-91 (Revised 1993), “Determination of Exempt Compounds,” SCAQMD “Laboratory Methods of Analysis for Enforcement Samples,” ~~incorporated by reference in~~ (see section 2, Volatile Organic Compound, and subsection 6.2).
- 6.5.11 **VOC Content of Coatings:** The VOC content of a coating is ~~shall be~~ determined by U.S. EPA Method 24 as it exists in appendix A of 40 Code of Federal Regulations (CFR) part 60, “Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings,” ~~1998, incorporated by reference in~~ (see subsection 6.2).
- 6.5.12 **Alternative VOC Content of Coatings:** The VOC content of coatings may be analyzed either by U.S. EPA Method 24 or SCAQMD Method 304-91 (Revised 1996), “Determination of Volatile Organic Compounds (VOC) in Various Materials,” SCAQMD “Laboratory Methods of Analysis for Enforcement

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Samples,” ~~incorporated by reference in~~ (see subsection 6.2).

- 6.5.13 **Methacrylate Traffic Marking Coatings:** The VOC content of methacrylate multicomponent coatings used as traffic marking coatings shall be analyzed by the procedures in 40 CFR part 59, subpart D, appendix A, “Determination of Volatile Matter Content of Methacrylate Multicomponent Coatings Used as Traffic Marking Coatings,” (September 11, 1998), ~~incorporated by reference in~~ (see subsection 6.24).

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**Table 1
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS**

Limits are expressed in grams of VOC per liter^a of coating thinned to the manufacturer's maximum recommendation, excluding the volume of any water, exempt compounds, or colorant added to tint bases. "Manufacturer's maximum recommendation" means the maximum recommendation for thinning that is indicated on the label or lid of the coating container.

Coating Category	Effective 1/1/2003	Effective 1/1/2004
Flat Coatings	100	
Nonflat Coatings	150	
<u>Nonflat - High Gloss Coatings</u>	<u>250</u>	
Specialty Coatings		
Antenna Coatings	530	
Antifouling Coatings	400	
Bituminous Roof Coatings	250 <u>300</u>	
<u>Bituminous Roof Primers</u>	<u>350</u>	
Bond Breakers	350	
Clear Wood Coatings		
• Clear Brushing Lacquers	680	
• Lacquers (including lacquer sanding sealers)	550	
• Sanding Sealers (other than lacquer sanding sealers)	350	
• Varnishes	350	
Concrete Curing Compounds	350	
Dry Fog Coatings	400	
Faux Finishing Coatings	350	
Fire Resistive Coatings	350	
Fire-Retardant Coatings:		
• Clear	650	
• Opaque	350	
Floor Coatings	400 <u>250</u>	
Flow Coatings	420	
Form-Release Compounds	250	
Graphic Arts Coatings (Sign Paints)	500	
High Temperature Coatings	420	

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Coating Category	Effective 1/1/2003	Effective 1/1/2004
Industrial Maintenance Coatings		250
Low Solids Coatings ^b	120	
Magnesite Cement Coatings	450	
Mastic Texture Coatings	300	
Metallic Pigmented Coatings	500	
Multi-Color Coatings	250	
Pre-Treatment Wash Primers	420	
Primers, Sealers, and Undercoaters	200	
Quick-Dry Enamels	250	
Quick-Dry Primers, Sealers, and Undercoaters	200	
Recycled Coatings	250	
Roof Coatings	250	
Rust Preventative Coatings	400	
Shellacs:		
• Clear	730	
• Opaque	550	
<u>Specialty Primers, Sealers, and Undercoaters</u>	350	
Stains	250	
Swimming Pool Coatings	340	
Swimming Pool Repair and Maintenance Coatings	340	
Temperature-Indicator Safety Coatings	550	
Traffic Marking Coatings	150	
Waterproofing Sealers	250	
• <u>Concrete/Masonry</u>	400	
• <u>Wood</u>	250	
Wood Preservatives	350	

^a Conversion factor: one pound VOC per gallon (U.S.) = 119.95 ~~119.82~~ grams VOC per liter.

^b Units are grams of VOC per liter (pounds of VOC per gallon) of coating, including water and exempt compounds.